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APRIL, 1937

VOLUME XIV, NO. 4



ANNUAL MEETING - NEW YORK, N.Y. - MAY 15, 1937

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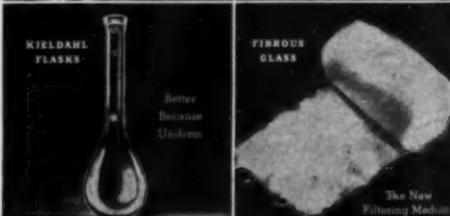
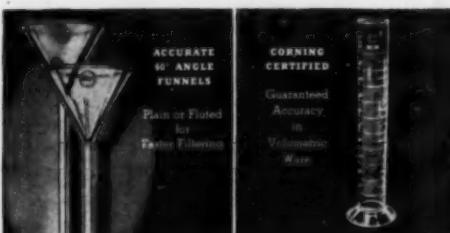
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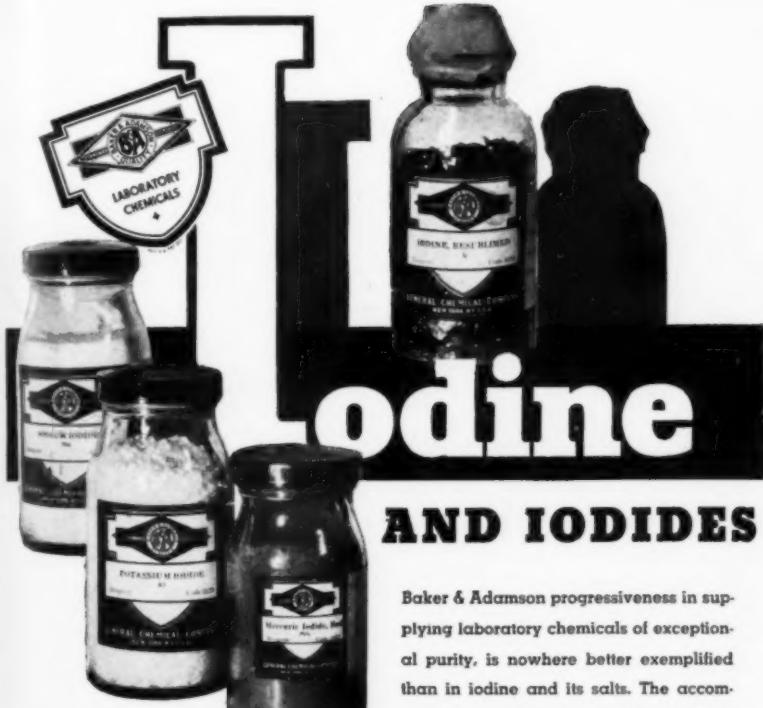
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The CHEMIST

April, 1957

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The CHEMIST

Publication of

THE AMERICAN INSTITUTE OF CHEMISTS, INC.

V. F. KIMBALL, *Editor*, 233 Broadway, New York City

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THE AMERICAN INSTITUTE OF CHEMISTS

HOWARD S. NEIMAN, *Secretary*

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New York, N. Y.

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PROGRAM

1937 ANNUAL MEETING

The American Institute of Chemists

Saturday, May 15, 1937 at THE CHEMISTS' CLUB, 52 East 41st St.,
New York, N. Y.

11:00 A.M. National Council Meeting, Room A.

12:15 P.M. Council Luncheon, Room A.

1:00 P.M. Registration, in Lobby. (Registration fee \$1.00.)

2:00 P.M. Annual Meeting, in Lounge.

ADDRESSES:

2:00 P.M.

DR. RAYMOND E. KIRK—"DEFINING A CHEMIST"

*Head of the Department of Chemistry, Polytechnic Institute of Brooklyn,
and Chairman of the New York Chapter, A.I.C.*

2:30 P.M.

DR. WILLIAM T. READ—"THE EMPLOYMENT OF CHEMISTS"

Dean, School of Chemistry, Rutgers University

3:00 P.M.

DR. WILLIAM M. GROSVENOR—"THE PROFESSIONAL CHEMIST"

President, William M. Grosvenor Laboratories

3:30 P.M.

Annual Business Meeting

7:00 P.M. Medal Banquet. (Members, Ladies, and Guests. Subscription \$2.00—The Chemists' Club.)

DR. MAXIMILIAN TOCH—Presiding

President, The American Institute of Chemists

Presentation of the Medal of THE AMERICAN INSTITUTE OF CHEMISTS

to

PROFESSOR JAMES F. NORRIS

Massachusetts Institute of Technology

SPEAKERS:

PROFESSOR TENNEY L. DAVIS—"THE MEDALIST"

Massachusetts Institute of Technology

PROFESSOR MARSTON TAYLOR BOGERT—Presentation of Medal

Columbia University

PROFESSOR JAMES F. NORRIS—Address

Please fill out the reservation blank on page 128 of this issue of THE CHEMIST, and send your reservations in early.

The American Institute of Chemists'
Medal Award — 1937
to
JAMES F. NORRIS



The medal of THE AMERICAN INSTITUTE OF CHEMISTS, presented annually for outstanding service to the science of chemistry or the profession of chemist in America, is awarded this year to Dr. James F. Norris, professor of organic chemistry, in charge of graduate students in chemistry, and director of the research laboratory in organic chemistry, at Massachusetts Institute of Technology, in recognition of his outstanding service as a teacher and as an investigator in the field of organic chemistry.

Dr. Norris' influence as a teacher on young men electing to enter the profession of the chemist has been outstanding.

His chief activities in research recently have been in the study of the reactivity of atoms and groups in organic compounds and the effect of substituents in a molecule on the reactivity of the groups studied. He has investigated the problem from the standpoint of reaction velocities and temperatures at which certain bonds break under heat influence.

The medal will be presented to Dr. Norris at the annual dinner of the INSTITUTE, to be held in New York, May fifteenth.

Our Poor Food Laws

By Max Trumper, F.A.I.C.

A talk given by Dr. Trumper, consultant in clinical chemistry and toxicology, before a Meeting of the Pennsylvania Chapter.

WE HEAR much nowadays about social security. My concern today, however, is for our physical security. We hear also about old-age security. My concern, however, is how shall we ever reach old-age? Unless our food supply is better protected, we may make a poor showing in the vital statistics of tomorrow. An exception may be made in the case of meat, which, as a result of long public effort, is now fairly well protected. The Federal Government exercises rigid control of the sanitary conditions of the meat industry. Yet meat, seldom being eaten raw, receives the additional protection of the cooking process to insure it against pathogenic organisms. Is it not inconsistent that vegetables and fruits, many of which are eaten uncooked, should be exempt from sanitary control of our government?

Prior to the Civil War, most of the food of our citizens was prepared and preserved in their homes. The Industrial Revolution caused the control of food preparation to slip away from the individual household with the result that families know less and less concerning the real quality of the food they eat. Since the bulk of food and food products is prepared in factories, the consumer's knowledge of it is largely second-hand information.

This shift from the home to the factory made possible large-scale adulteration. The development of the next few decades has been termed the "hide-and-seek system". Foods were adulterated with compounds of unknown composition and officials of public health had to seek the hidden fraud. At first simple adulterants were in vogue, like cotton-seed oil for olive oil. Milk was occasionally thickened with glue—to simulate cream. Later came alum, borax, sulphurous acid, and salicylic acid. Sulphur dioxide was used to bleach sugar; copper sulphate

to give the bright green appearance to canned vegetables. Saccharin posed as sugar. Benzoate of soda became the most commonly used preservative. The large wholesalers did not want the label to contain the name of the real manufacturer. This would result in quality competition and the public would soon learn the name of the reliable food manufacturer. Yet certain independent food firms, then as now, were insistent on their name appearing on the label.

Competition Inspired First Legislation

In 1902, the Congress enacted legislation "prohibiting the misbranding of foods as to the state or territory in which the product was produced." This law was passed primarily to keep Western cheese producers from labeling their product as New York or Philadelphia cream cheese. However, the law of 1902 was made to apply to all foods and the public reaped the benefit because of the competition of Eastern and Western cheese manufacturers, for this law applied also to fruit, dairy, and wine products to protect the producers of those regions well-known for their local specialties. For instance, it was supposed to prevent cottonseed oil packed in Georgia or Alabama from being sold as olive oil. Likewise "southern molasses", if packed in a beet sugar state like Colorado, would seem a bit incongruous; while salmon packed in Minnesota would be known to the trade, if not to the public, as carp. But this bill did not prevent the cottonseed oil, the molasses or the carp from being shipped to and subsequently packed in the region known for the superiority of its local products.

In 1903, Congress enacted a law which protected the consumers in the United States from the dumping of filthy or adulterated foods from abroad which could not be sold in the countries of their origin. For instance, articles of food sold in England and Germany as adulterated were sold in the United States as pure. The common method of procedure for adulterators was first to get a foothold and then by easy steps of modification to develop a complete substitute. For example, oleomargarine was made at first from selected fats colored with harmless tumeric. Later the coloring matter was changed to coal-tar dyes, and indigestible fat substitutes like paraffin were used.

Thus we have seen that prior to 1906 pure food legislation, both state and federal, was enacted at the request of processors and distributors of food who sought to protect themselves against dishonest competitors at home and abroad.

It was the agricultural chemists of thirty and forty years ago headed

by that crusader, Harvey W. Wiley, who found and publicized the evils of food adulteration. Dr. Wiley was able to dramatize his extensive researches on the poisonous adulterants by his famous "Poison Squad" and this demonstrated to the public the danger of preservatives in food. An aroused public opinion forced through Congress our first real Pure Food Law. As a result, formaldehyde was no longer used as a preservative in milk. Catsup made from rotten tomatoes could no longer be made possible by preservatives. However, the burden of proof was on the Government and the fine for the first offense was a paltry two hundred dollars.

Misleading Advertising

At that time, food manufacturers sold their products largely through the appeal of the label, and so for a limited time the new laws were effective. But with the growth of advertising as we know it today, the public is misled just as effectively by partial presenting of facts. The present law demands true facts on the label, but the writer of advertising matter and the radio broadcaster are free to create false publicity to the limit of their vocabularies. The fields of cosmetics, of girth control, and vitamins give them ample room to expand their imaginations. In short while the Pure Food Law was a step forward, it resulted in a transfer of falsification from the label to the advertising column and the loud speaker.

The advances in our scientific knowledge of foods and nutrition since the enactment of the Wiley Pure Food Laws of 1906 have been phenomenal. In this interval of twenty-seven years, while many amendments have been recommended to Congress by the Food and Drug Administration of the United States Department of Agriculture, nearly always the bills have been asphyxiated in committee. In practically only a single instance was their recommendation enacted into law. Thus it has been possible for the public to be bombarded with false and misleading advertising. Quacks of every variety and pseudo food experts have prospered to a degree which closely parallels that of the sellers of worthless stocks and securities. With the increasing number of chemical units found necessary to wholesome diet, there arises increased opportunity for captivating the gullible public under the guise of science with the common denominator of fear. Thus to date there is a possibility of five to eleven specific deficiency diseases due to the lack of any one of the following mineral elements: calcium, magnesium, sodium, potassium, chlorine, iodine, phosphorous, sulphur, iron, copper,

and manganese. In addition, there are six known vitamin deficiency diseases with a possible total of ten. And of the twenty-two amino acids essential to an adequate protein diet, several must be obtained in the food because the body is unable to synthesize these amino acids.

This growing number of chemical units found to be necessary to a wholesome diet is seized by advertisers, dramatized and used to frighten the public into buying the advertised product.

In 1934, when Tugwell "Bill" tried to hold-up Food Racketeers, the food industries of this country had their chance to make good their high sounding complaint against State Food Laws. "Let a federal bill be introduced and we'll support it", they declared. Their efforts were to sponsor four different Food Bills in order to deflect support from the original bill. The Tugwell Bill seemed to be inseparably linked with the New Deal. Its social philosophy was similar to the new Federal Securities Act which changed the old principle of commerce, *caveat emptor*, let the buyer beware! to the new emphasis of *caveat vendor*, let the seller beware! The Tugwell Bill died in Committee.

The Copeland Bill

On January 3, 1935, Senator Copeland introduced Senate Bill S-5, which was subsequently amended to the point of mutilation. The problem of food adulteration is an immense one. Even under our present inadequate inspection provisions, during November, 1934, nearly 16,000 bushels of apples bearing excess poison residues were seized by the Federal Food and Drug Administration. Also some 3,000 gallons of cream and 11,676 pounds of unfit butter were confiscated and destroyed. Also 4,000 cases of canned shrimp, 4,300 cases of canned mackerel, 7,000 cans of cottonseed oil, corn oil, and bean oil, with little or no olive oil, were seized because they were labelled to indicate that they were largely of olive oil. These seizures were made possible because the present Wiley Law permits multiple seizures—an effective weapon.

Over a year ago President Roosevelt, in his special message to Congress on food and drug legislation, stated "this subject has been studied and discussed for the last two years and full information is in the possession of the Congress." Another year has passed during which time lobbyists for the manufacturers, distributors and advertisers of drugs, cosmetics, and foods, not to mention the ubiquitous patent medicine interests, have worked overtime and were able to insert "joker provisions" which will perpetuate our Poor Food Laws. Under the "Guinea Pig" Amendment of Senator Bailey of North Carolina, the

government will be limited to seizure of a single interstate shipment no matter how many consumers were misled by the false label. This would prevent, for example, the seizure as in the past of hundreds or thousands of pounds of butter, unless the consumers should become seriously ill. Senator Copeland has recently redrafted his bill in accordance with the objections previously made by President Roosevelt. On March 9, 1937, the Senate unanimously passed this bill and it is now awaiting action in the House of Representatives.

There is an almost unanimity of opinion among scientists that there must be control to prevent the adulterating, misbranding, and misleading advertising of foods, drugs, and cosmetics, permitted under our old Pure Food Laws.



A Study of Nobel Prize Statistics

By Rudolf Seiden, C.E.

THE highest scientific distinction that an inventor can obtain since the beginning of the twentieth century is the Nobel prize.

It is also the most authentic measurement for the value of a scientific work. Doubtless, its trustworthiness is due to the last will of Bernard Nobel, who specified that the Nobel prize was to be awarded, without regard to race or religion, to those persons who contributed most to the benefit of mankind.

When Nobel died in the year 1896, he left nine million dollars. The interest from this money is available each year (since 1901) for the distribution of five Nobel prizes, each one of them valued at a little more than \$40,000. The Swedish Academy of Science awards the prizes for chemistry and physics; the Medical Faculty of the University of Stockholm awards the prize for medicine and physiology (together); the Swedish Academy of Literature awards the literature prize; and finally, the peace prize is awarded by a committee of five men, elected by the Norwegian Parliament. The Swedish Government, with elaborate ceremonies in the presence of the king each year bestows these Nobel prizes on the chosen recipients. During the past thirty-six years, one hundred and eighty-seven persons and three international institutions (the Red Cross, the Peace Court of The Hague, and the Institute for International Laws) received a total of one hundred and fifty-five Nobel prizes. Many years not all five

prizes were awarded, and on the other hand, sometimes a prize has been divided between two or three persons.

Without including the three peace prizes given to institutions, the following table shows the participation of various countries in the Nobel prizes awarded to one hundred and eighty-seven persons:

Country	Physics	Medicine	Peace	Chemistry	Literature	persons	Total prizes
Germany	12	7	3	15	4	41	36
England	9	6	4	5	4	28	22½
France	6	4	6	6	6	28	20½
U. S. A.	4	6	7	3	2	22	17½
Sweden	2	2	3	3	3	13	11½
Netherlands	4	2	1	1	—	8	6
Denmark	1	3	1	—	2	7	5½
Switzerland	1	1	3	1	1	7	5½
Austria	1	2	2	1	—	6	4½
Italy	1	1	1	—	3	6	4½
Norway	—	—	2	—	3	5	4½
Belgium	—	1	2	—	1	4	3½
Spain	—	1	—	—	2	3	2
Canada	—	2	—	—	—	2	1
Poland	—	—	—	—	2	2	2
Russia	—	1	—	—	1	2	2
India	1	—	—	—	1	2	2
Argentina	—	—	1	—	—	1	1
Total	42	39	36	35	35	187	152

This table shows the prize winners listed in the countries where they were living at the time when they received the Nobel prize, as this way of listing is used by the Nobel prize committee itself. But this method of listing the winners may cause misunderstandings. For example, in Germany there are among the forty-one Nobel prize winners not less than eleven Jews (or non-arians) and therefore these should not be counted as Germans, as this is forbidden in Germany according to the Arian laws. On the other hand, there are also Arians credited to Germany who were born in foreign countries, as was Professor Debye, winner of the Nobel prize for chemistry in 1936, who teaches in Germany, but who came from the Netherlands. A table

of Nobel prize winners with regard to their countries of birth would show higher numbers of prize winners for Austria, Netherlands, Poland, and Russia, and smaller numbers for Germany, France, United States, and Sweden. On this new list, the twenty-eight Englishmen would be in first place, second the Germans, and third the Jews and Half-jews (if we care to consider them a separate nation).

If we consider the relationship between the population of the countries winning the one hundred and fifty-two Nobel prizes and the population of the world, we get an interesting result: We now have one Nobel prize winner among thirteen and two-tenths millions of human beings. Therefore, the Swedes and Norwegians have done most for the benefit of mankind (according to Bernard Nobel) indeed, twenty times more than the average. Then follow the Swiss, the Danes, and the Jews with fifteen times more than the average; the Dutch with eight and one-half times more; the English with seven and three-tenths more; the Austrians, Belgians, and Germans, with four and four-tenths times more; the French, four times more. Rather average are the Americans, Italians, Canadians, Argentinians, and Spaniards, while the Poles remain a bit behind, and the Russians and Indians are very much behind the average.

With regard to the Nobel prizes in chemistry, we find that thirty-five winners from eight countries received thirty-one prizes. The greatest part of them came to Germany, namely fourteen—reduced to ten, if we exclude the Jews and Half-jews, Baeyer, Haber, Wallach, and Willstätter.

The average age of the chemists at the time they received the Nobel prize was fifty and eight-tenths years. For physicists, it is about four years fewer, for all others higher (winners of the prizes in literature are nine years older than the chemists, on the average). Therefore, the Nobel prize is more an honor than a source of subsidy for further works. The latter, however, was the wish of Nobel when he founded his great prize. The youngest winners of Nobel prizes in chemistry were Rutherford, age thirty-seven, Madame Curie-Joliot, age thirty-eight, and Urey, age forty-one years. The oldest winners were Wallach, age sixty-three, and Harden, age sixty-four. More than half of the Nobel prize winning chemists today are living. They are working in universities, research institutes, or sporadically in industry.

The thirty-five winners of the Nobel prize in chemistry, listed in regard to their chemical specialty, are:

1. *Physical chemistry:*

Name	Year	Country
van't Hoff	1901	Netherlands
Arrhenius	1903	Sweden
Ostwald	1909	Germany
Nernst	1920	Germany
Aston	1922	England
Zsigmondy	1925	Germany
Svedberg	1926	Sweden
Langmuir	1932	U. S. A.
Urey	1934	U. S. A.
Debye	1936	Germany
Total		10 men and 32.26% of the Chemistry Nobel prizes.

2. *Biological Chemistry:*

Buchner	1907	Germany
Willstätter	1915	Germany
Weiland	1927	Germany
Windaus	1928	Germany
{ Harden and	1929	England
{ von Euler-Chelpin	1929	Sweden
Hans Fischer	1930	Germany
Total		7 men and 19.36% of the prizes.

3. *Organic Chemistry:*

Emil Fischer	1902	Germany
von Baeyer	1905	Germany
Wallach	1910	Germany
{ Grignard and	1912	France
{ Sabatier	1912	France
Pregl	1923	Austria
Total		6 men and 16.13% of the prizes

4. *Radioactivity:*

Rutherford	1908	England
Mme. Curie	1911	France
Soddy	1921	England
{ Joliot and	1935	France
{ Mme. Curie-Joliot	1935	France
Total		5 scientists and 12.90% of the prizes.

5. *Inorganic Chemistry:*

Sir Ramsay	1904	England
Moissan	1906	France
Werner	1913	Switzerland
Richards	1914	U. S. A.
Total		4 men with 12.90% of the prizes.

6. *Industrial Chemistry:*

Haber	1918	Germany
{Bosch and	1931	Germany
{Bergius	1931	Germany
Total		3 men and 6.45% of the prizes.

These tables show that before the World War most of the Nobel prizes were awarded for organic and inorganic chemistry, while after the War, in addition to industrial chemistry, physical and biological chemistry and the chemistry of radioactive substances were successfully investigated. All of the Nobel prizes for industrial chemistry went to Germany, but not one for inorganic chemistry or radioactivity. France received most of these latter awards, to one family, Curie-Joliot! Mme. Curie was also the only person who received two Nobel prizes — one together with her husband, Professor P. Curie for physics, and one for chemistry. Also her daughter and her husband, Prof. Joliot, possess a Nobel prize in chemistry.

For investigations in the field of inorganic chemistry, there has been no Nobel prize awarded for twenty-three years. In organic chemistry, apart from microchemistry, the last award was given twenty-five years ago. Germany also received most of the Nobel prizes in biochemistry. The prizes for physical chemistry were awarded not only to chemists but also to physicists, which would seem to show that this branch of science has been investigated by the greatest number of scientists. In this connection, many of the Nobel prize winners in physics are also chemists, especially the investigators of atoms and of radiation. Among the winners of medical and physiological awards, there are also chemists or men educated in chemistry, whose work often gravitates toward the chemical field. Among these "limit chemists", I want to mention: (1) Physiologists and biochemists, who received the Nobel prize in Medicine: Finsen (chemical rays of light); Pavlov (digestive glands); Ramon-y-Cajal (cells); Ehrlich* (salvarsan); Kossel (nucleins and their cleavage products); Meyerhof* (transfor-

mation of lactic acid in muscles); Banting and MacLeod (insulin); Sir Hopkins (vitamins); Warburg* (respiratory ferment).

(2) Scientists who worked upon atoms, radiation, etc., and received the Nobel prize in Physics: Röntgen (X-rays); Lorentz (electrons); Zeeman (atoms); Becquerel (alpha-radiation); Pierre and Marie Curie (radium and polonium); Lord Rayleigh-Strutt (argon and helium); Lenard (phosphorescence and cathode rays); Thomson (radioactivity); Lippmann* (color photography); Braun (corpuscle radiation); van der Waals (kinetic theory of gases and liquids); Wien (radiation); Kamerlingh-Onnes (deep temperatures); von Laue (structure of matter); Sir W. H. Bragg and W. L. Bragg (crystal structure); Barkla (spectroscopy); Planck (quantum hypothesis); Stark (spectrum lines); Guillaume (metals and temperature measurement); Bohr* (quantum hypothesis and spectrum theory); Millikan (electrons); Siegbahn (spectroscopy); Franck* (atoms); Hertz (gases); Perrin (atoms); Compton (electrons); Wilson (ionisation of alpha particles); Richardson (electrons of incandescent substances); Prince de Broglie (quantum hypothesis and structure of matter); Sir Raman (diffraction of X-rays); Heisenberg (structure of matter); Schrödinger (quantum mechanics); Hess (cosmic rays); Anderson (positron).

If we return for a moment to the Nobel prize winners in chemistry, we find that thirty-two of them were university professors at the time they were honored—four were at the University of Paris; three at Berlin, three at Göttingen, three at Munich, two at Heidelberg, two at London, two at Stockholm, one each at Cambridge, Columbia, Graz, Harvard, Leipzig, Manchester, Nancy, Oxford, Toulouse, Uppsala, and Zürich. Further one chemist was teaching at the Technical University in Munich, one at the Agricultural University in Berlin, one at the Kaiser Wilhelm Institute, Berlin-Dahlem. Only three men, Bosch, Bergius, and Langmuir, were working in industry, but since then, they also have been appointed to professorships.

*Jew or Half-Jew.

Rudolf Seiden

Rudolf Seiden, C.E. (Technical University, Vienna), author of the above article, is a consulting engineer in chemistry and metallurgy, and is also widely known as a contributor and correspondent for many technical papers, among them *Chemiker-Zeitung* (Köthen), *Chemie et Industrie*,

trie (Paris), La Chemica e L'Industria (Rome), and Deutsche Allgemeine Zeitung (Berlin). He is the author of several books, among them "Rubber", and "Comparing Examinations of the Influence of Various Outside Factors, Especially on the Ash-content of Plants," and holds a patent on "Proceedings for Hardening of Flat Glass."

During the past sixteen years he has studied the theory and practice of chemistry and metallurgy in four continents. He worked on the Dead Sea project before the concession for the exploitation of the salts in the Dead Sea was obtained by Sir Mond-Lord Melchett, and his researches on this and on the bituminous stones and asphalt in the Near East have been published.

Qualified as a consultant in professional and industrial matters, and to give information about scientific developments in Middle and Eastern Europe, especially those in Russia and the Near and Far East, he has access to many sources of information in foreign countries.

He is particularly interested in research work in connection with agricultural problems, and prefers to live in California or Western States "with good climate and mountains and lakes, because I come from one of the most beautiful parts of the world, Austria." He lives, at present, with his wife and two sons in Kansas City, Missouri.

Position Wanted

Research Chemist and Bibliographer. Age 31. Married. A.B. University of Paris, Ch.E. Federal Polytechnic School (Zurich), Ph.D. American University, Washington, D. C. Five years' experience at research work in biological stains, organic dyes, sugars, alcohols, catalytic syntheses. Thorough knowledge of German, French, Russian. Reading knowledge of Italian and Spanish. Thoroughly familiar with the literature, translations, abstracts, patent searches. Box 4, *THE CHEMIST*.

Educational Positions Wanted

Two members of the teaching profession, of several years' experience, desire a change. Both hold the degree of Ph.D. One has taught physical, inorganic, and organic; the other only organic. Both have publications to their credit and both have directed research. One is a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS. Dissatisfaction with present locations is not a factor in the desire for a change on the part of either. Correspondence would be welcomed with any educational institution desiring to discuss the possibility of an opening. Address replies to Box 14, *THE CHEMIST*, 233 Broadway, New York, N. Y.

BOOKS

A BRIEF COURSE IN QUALITATIVE CHEMICAL ANALYSIS. By Louis J. Curtman. *The MacMillan Co.* Price—\$2.25.

A course for beginners in Qualitative Analysis treated from a modern viewpoint is always welcome.

Points which this reviewer appreciated particularly were the treatment of the limitations of a qualitative analysis on page 4; the discussion of complex ions on pages 51-54; and the tables of partial equations for oxidation and reduction reactions which provide a convenient list for laboratory workers as well as for students.

A careful reading of the text brings to light very few errors. The foreign, form, "benzol" is used on page 18 for "benzene". The radical called "nitro cobaltate" on page 111, is referred to as "cobaltinitrite" on page 124. On page 87, basic bismuth sulphate is given the formula $(\text{BiO}_2)_2\text{SO}_4$, a misprint for $(\text{BiO})_2\text{SO}_4$. Zinc is misprinted "zone" on page 57. A few of the modern organic reagents might have been mentioned, in addition to those for magnesium, and of course, nickel.

The general set up of the book is convenient with theory grouped at the beginning, followed by preliminary experiments, and finally systematic analysis. The common metals are treated very thoroughly, the acids less completely, and a section is devoted to the identification of simple substances. The text should be entirely suitable in first courses in qualitative analysis, and should give a firm foundation to students intending to continue in chemistry.

--Robert Schmeidler, F.A.I.C.

MORE FOR YOUR MONEY. H. Bennett, F.A.I.C. *Chemical Publishing Company of New York, Inc.* 1937. xii + 251 pp. Price, \$2.75.

THE COSMETIC FORMULARY. H. Bennett, F.A.I.C. *Chemical Publishing Company of New York, Inc.* 1937. xix + 259 pp. Price, \$3.75.

Although it is not uncommon nowadays for a reviewer to be given several books on the same or related subjects, by different authors, published within a short time, it is a rare privilege to have in hand two quite different books by the same author, printed in different countries and published almost simultaneously.

In *More for Your Money*, the protean Mr. Bennett is lined up with the professional reformers — but with a commendable difference of intent. Instead of being merely destructive of everything we like to buy for our beauty, health, and happiness, he strives to warn us against the most flagrant deceptions, and show us how to protect ourselves by making tests on everything and sundry.

The introductory chapters on buying in general, and how to read labels and check quantities, contain much good information for consumers. The rest of the book discusses cosmetics and drugs; foods and beverages; electrical devices and other household equipment and furnishings; all kinds of clothing; jewelry and optical goods; building materials, automobiles, mail order courses in this-and-that, and still more "miscellaneous" items. Most of the material is acknowledged to have been lifted from various government publications and from the "Better Buymanship" pamphlets of the Household Finance Corporation, Chicago, and the debt is disconcertingly obvious in the frequent changes in the literary style.

Multiplicity of sources also multiplies a compiler's chances for a good "alibi". When, for instance, the reader is told (page 20) that to test for lead in a hair dye, he should put some of the suspected colorless solution into a beaker, add some HCl, and look for a black precipitate of PbS, one is tempted to ask, "What kind of chemistry—whose private brand of chemistry—is that?" Other errors, inaccuracies, wrong deductions, and misleading inferences range from merely silly to potentially dangerous.

A chemist or teacher, who wants to save the trouble of assembling information from all the same sources, might find this book useful as a skeleton guide for consumer education. Such a trained person would undoubtedly have other knowledge to substitute for what is not usable here, but the poor consumers for whom this work is intended could do little for themselves. Unless they know their way about in a well-stocked chemical laboratory, this book would be but a bewildering and expensive guide to safety.

From the "worm's-eye view" of the cosmetic industry, so readily acquired from the one superficial chapter in *More for Your Money*, any uninitiated reader would be dazzled by the brilliant possibilities set forth in *The Cosmetic Formulary*. Here are thousands of recipes for everything made in the cosmetic and allied industries. With unseemly avidity, one notes that many of the substances mentioned fear-

somely in the other book are suggested here for use in depilatories, eyes, deodorants, etc.

The first book preaches the publication of formulas on labels so that the poor benighted public will know what is being perpetrated on it; but what earthly good (besides publicity) can be derived from publishing synthetic names of unexplained proprietary ingredients? The text is followed by useful conversion tables, common names of chemicals, and lists of manufacturers of raw materials and equipment. Tracing a proprietary name through these lists to a source makes a nice little game.

Reviewing two such books together arouses a welter of conflicting thought. There is a definite place for any good, carefully edited formulary, but it should serve as a means, not as an end in itself.

Following in the wake of too many books which convey the idea that "anyone can be a chemist", this one furthers another fallacy—that "anyone can make cosmetics." It seems not to have occurred to our colleague that it is just "patient experimenting" out of books like this which gives "fly-by-nighters" the chance to concoct messes in shadowy back rooms, peddle them at cut rates, and thus cause unfair competition and much exasperation to legitimate manufacturers who spend good time and money in research and testing before they release their products to the consumer. The professional crusaders, recommended so highly in the other book, raise so much dust belaboring the more obvious canals that they usually do not see these troublesome gnats.

One more inconsistency here: after a comprehensive summary of manufacturing procedures, the "experimenter" is told, in effect, that as a last resort—when he becomes hopelessly stuck—he should call on a consulting chemist. Oh, it is all very sad, and *very* confusing!

FLORENCE E. WALL, F.A.I.C.

PROCTER'S LEATHER CHEMISTS' POCKET BOOK. By Atkin and Thompson. 3rd Edition. \$6.00. Distributed by the Chemical Publishing Company.

This book contains in full detail methods for the analysis of materials entering into the manufacture of leather and methods for testing the finished leather.

In addition, it contains rather more theoretical explanation of the methods used, particularly with reference to pH, than one ordinarily expects in a handbook of this sort. While this may be of value to

laboratory workers whose technical training has been neglected, we doubt that it would be of any particular benefit to competently trained chemists.

The methods, on the other hand, have been especially developed for and used in the leather industry, and in that respect the book should prove useful to workers in the field of leather. However, they represent British practice rather than American.

K. M. H.

THE CHROME TANNING PROCESS. By E. W. Merry. \$4.50. Distributed by the Chemical Publishing Company.

This book is divided into two parts which treat the chrome tanning process from a practical and from a theoretical aspect respectively.

The practical part, which occupies the first third of the volume, includes chapters on the preparation of technical chrome tanning liquors, two chapters discussing respectively the one and two-bath processes, and a chapter on works control. Incidentally, the first section ends with an excellent bibliography.

The theoretical part of the book commences with a discussion of the chemistry of chromium salts based, of course, on the Werner Theory and a discussion of chrome tanning itself from a theoretical aspect.

In this connection there are two appendices which summarize a few outstanding experimental studies of chrome tanning in their relation to the theory of the processes involved. This section also contains a short bibliography, and the volume concludes with a fairly good index.

As with the preceding volume, the field for and interest in the present one are rather severely limited to workers in the field.

K. M. H.



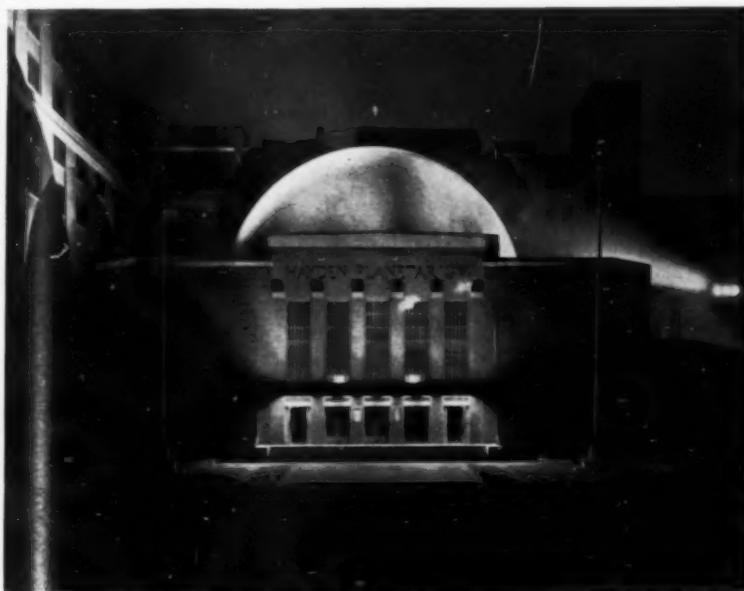
For the convenience of our readers, any of the above books may be obtained through **THE CHEMIST**, 233 Broadway, New York, N. Y.



A detailed study of the use of glycerine in the medical and pharmaceutical fields, "Glycerine: Its Role in Medicine", by Milton A. Lesser, B.Sc. and John R. Murphy, M.D., has been published as a booklet. It is reprinted from the American Professional Pharmacist where it first appeared and will be sent free to physicians, chemists, pharmacists, and other professional men, on request to the Glycerine Producers' Association, 381 Fourth Avenue, New York City.

Allen F. Odell

It is with deep regret that THE AMERICAN INSTITUTE OF CHEMISTS records the death of Allan F. Odell, chemical director of the plastics department of the Du Pont Viscoloid Company, Arlington, N. J. Dr. Odell studied at Vanderbilt University from which he obtained the Ph.D. degree. After teaching at Louisiana State University for three years, he entered industry, and from 1918 to his death, on April 10, 1937, he was employed by E. I. du Pont de Nemours and Company. He specialized in organic chemistry, dyestuffs, pharmaceuticals, plastics, and resins. He also contributed much to photographic research in his spare time. He is survived by his wife, two sons and two daughters. In 1932 he became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS.



The photographs in this issue of THE CHEMIST were loaned through the courtesy of the New York Convention and Visitors' Bureau, unless otherwise credited.



COUNCIL OFFICERS

President, MAXIMILIAN TOCH
Vice-President, ROBERT J. MOORE

Secretary, HOWARD S. NEIMAN
Treasurer, BURKE H. KNIGHT

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NORMAN A. SHEPARD
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<i>New York</i> LLOYD VAN DOREN	<i>Niagara</i> ARTHUR W. BURWELL	<i>Philadelphia</i> C. W. RIVISE	<i>Washington</i> LOUIS N. MARKWOOD
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February Meeting

The one-hundred and thirty-ninth meeting of the Council of THE AMERICAN INSTITUTE OF CHEMISTS was held at The Chemists' Club, 52 East 41st Street, New York, N. Y., on February 18, 1937, at 6:00 o'clock P. M.

President Maximilian Toch presided. The following officers and councilors were present: Messrs. F. G. Breyer, A. W. Burwell, B. H. Knight, H. G. Knight, R. J. Moore, H. S. Neiman, N. A. Shepard, M. Toch and F. W. Zons. Miss V. F. Kimball was also present.

The minutes of the previous meeting were approved.

Dr. Toch reported that he had an appointment with Dr. F. P. Graves, State Commissioner of Education, to discuss the matter of licensing chemists.

The Secretary read a letter from the

Secretary of the Washington Chapter requesting a definition of the territory over which they should have jurisdiction. After discussion, and upon motion made and seconded, Dr. H. G. Knight was appointed chairman of a committee to determine Chapter boundaries. Dr. Moore was appointed as the other member of this committee.

The Secretary read several bids for printing THE CHEMIST, and it was found that our present printer is doing this work for a sum substantially less than that of any of the bids received.

The following new members were elected:

FELLOWS

LEO P. CHEBOTAR, *Water Supply Department*, Municipal Building, Room 2346, New York, N. Y.
ARNOLD R. DAVIS, *Chemist in Charge of Rubber Section*, American Cyanamid Company, Stamford, Conn.

WILLIAM H. HARDING, *Head of Paper Chemicals Division*, American Cyanamid Company, Stamford, Conn.

ROBERT E. HUSSEY, *Professor of Organic Chemistry*, Virginia Polytechnic Institute, Blacksburg, Virginia.

SIMON MENDELSON, *Chief Chemist*, Snow King Baking Powder Company, Cincinnati, Ohio.

JAMES H. WILLIAMS, *Research Chemist*, American Cyanamid Company, Stamford, Conn.

ASSOCIATES

PETER C. JURS, *Organic Research Chemist*, American Cyanamid Company, Stamford, Conn.

CLYDE A. SLUHAN, *Textile Chemist*, American Cyanamid Company, Stamford, Conn.

JUNIORS

PIERPONT ADAMS, *Chemist*, American Cyanamid Company, Stamford, Conn.

FARRIS S. SWACKHAMER, *Chemist*, American Cyanamid Company, Stamford, Conn.

Upon motion made and seconded, the Secretary was requested to notify the following members that they had been appointed to bring in members from their particular industry:

Gustav Egloff, Petroleum Industry

Norman A. Shepard, Rubber Industry

Frank G. Breyer, Metals Industry

Henry G. Knight, Government

Chemists

The Secretary announced that three councilors were to be elected at the Annual Meeting.

The Treasurer's report, showing a cash balance on hand of \$1808.56, was read and accepted.

The Committee on Arrangements for the Annual Meeting reported that it recommended that the meeting be held at The Chemists' Club, New York, N. Y., on Saturday, May 15, 1937.

Upon motion made and seconded, this report was approved by the Council.

There being no further business, adjournment was taken.

March Meeting

The one-hundred and fortieth meeting of the Council of THE AMERICAN INSTITUTE OF CHEMISTS was held at The Chemists' Club, 52 East 41st Street, New York, N. Y., on March 18, 1937, at 6:00 o'clock P. M.

President Maximilian Toch presided. The following officers and councilors were present: Messrs: F. G. Breyer, M. L. Crossley, B. H. Knight, L. N. Markwood, R. J. Moore, H. S. Neiman, W. T. Read, A. Rogers, N. A. Shepard, M. Toch, L. Van Doren and F. W. Zons.

Dr. Frederick E. Breithut was present. Miss V. F. Kimball was also present.

The minutes of the previous meeting were approved.

The Treasurer's report, showing a cash balance on hand of \$1,041.63, was read and accepted.

Dr. Toch reported that he had conferred with the Public National Bank, and that he recommended that the INSTITUTE funds be transferred from the Chase National Bank to the Public National Bank.

Dr. Toch reported that he had conferred with the Attorney General of the United States, at the request of President Roosevelt, in reference to the clarification of the present patent law and the revision of the McAdoo Bill. At this conference, the Attorney General suggested that the Council of the INSTITUTE consider the following questions: (1) What are the evils of the present patent legislation? (2) What would you consider to be the remedy? (3) What parts of the McAdoo Bill

are good and what parts are bad? (4) Please summarize your recommendations.

Upon motion made and seconded, the following committee suggested by Dr. Toch was approved by the Council: William M. Grosvenor, patent expert; Howard S. Neiman, patent attorney; Frank G. Breyer, patent expert, and Maximilian Toch, ex-officio. This committee is to meet at an early date and to arrange a meeting with the Attorney General to present its suggestions.

Dr. Toch reported that he had conferred with Dr. Harlan H. Horner, State Commissioner of Education, on the subject of the licensing of chemists. The pharmacists have introduced a bill into the state legislature, which would entitle them to call themselves chemists. Dr. Toch will report the results of conferences to be held later.

The Secretary read a report from Dr. H. G. Knight that he would make suggestions concerning the territory to be covered by the Washington, D. C., Chapter, at a later date.

The report of the Jury of Medal Award was received, and the Jury was requested to determine if the chosen medalist would accept the medal.

Upon motion made and seconded, it was agreed to hold the next meeting of the National Council on April 22, 1937.

The Secretary reported that the INSTITUTE now has 1123 members, ex-

clusive of those to be elected at this meeting.

The following new members were elected:

FELLOWS

ALBRECHT A. DOUGLAS-SAUERMANN, *Research Work*, 157 West 78th Street, New York, N. Y.

CECIL JEROME HAGGERTY, *Professor of Chemistry*, Holy Cross College, Worcester, Mass.

HOWARD STANLEY PHELPS, *Chemist*, Electrographic Corporation, 216 East 45th Street, New York, N. Y.

ANTHONY J. REVUKAS, *Laboratory Assistant*, Brooklyn Edison Company, 55 Johnson Street, Brooklyn, N. Y.

SAMUEL SCHENBERG, *Instructor in Chemistry*, Bay Ridge High School, 4th Avenue and 67th Street, Brooklyn, N. Y.

Mr. Breyer reported that he had recently addressed the Niagara Chapter of the INSTITUTE, and he brought greetings from the Niagara Chapter to the National Council.

The Secretary read a letter from the Washington Chapter regarding the Committee to Consider the Economic Status of Chemists. Dr. Van Doren, Chairman of the Committee, reported that he would be in Washington the latter part of the month, that meetings had been arranged, and that he would make a full report at the next meeting of the Council.

There being no further business, adjournment was taken.

CHAPTERS

New York

Chairman, Raymond E. Kirk *Vice-chairman*, D. D. Berolzheimer
Secretary-treasurer, James W. H. Randall
52 East 41st Street
New York, N. Y.
Council Representative, Lloyd Van Doren

Niagara

Chairman, Groves H. Cartledge

Vice-chairman, Howard W. Post

Secretary-treasurer, William R. Sheridan

1439 Kenmore Avenue

Kenmore, New York

News Reporter to THE CHEMIST, William A. Smith

Council Representative, Arthur W. Burwell

The eighteenth regular meeting of the Niagara Chapter was held Friday evening, March fifth, at Norton Hall, University of Buffalo. Following the dinner, the meeting adjourned to the auditorium.

The Chairman appointed F. L. Koethen as chairman of the nominating committee, and as additional members, C. F. Smith and L. Lawton. Mr. C. F. Smith introduced the speaker of the evening, Mr. Frank G. Breyer, F.A.I.C., consulting chemist of New York City, a councilor of the INSTITUTE, and former director of research for the New Jersey Zinc Company. Mr. Breyer spoke on "The Profession of Consult-

ing Chemist and Chemical Engineer; its Present and Future". He stressed the point that a healthy and well organized group of consultants is essential to the status of chemistry as a profession, and that this can be accomplished only by the organization and co-operation of all chemists. An essential qualification of any professional group is the ability of a large percentage of the members to stand on their own feet economically, as evidenced by the medical and legal profession. His very interesting and inspiring talk was followed by comments from the floor.

Additional notes on Mr. Breyer's talk will appear in the next issue of THE CHEMIST.

Pennsylvania

Chairman, Joseph W. E. Harrisson

Vice-chairman, Lewis D. Newitt

Secretary-treasurer, Avenir Proskouriakoff

67 Fairview Avenue

Lansdowne, Penna.

Council Representative, Charles W. Rivise

Washington

Honorary President, Charles E. Munroe

President, Louis N. Markwood

Vice-President, Norris W. Matthews

Treasurer, James B. Martin

Secretary, Ralph B. Deemer

213 Maple Avenue, Takoma Park, Maryland.

News Reporter to THE CHEMIST, James F. Couch

Council Representative, Louis N. Markwood

On February twenty-fifth the members of the Chapter met for luncheon in a private dining room of the cafeteria of the Department of Agriculture. The

meeting was addressed by the Hon. Edgar B. Brossard, Member of the United States Tariff Commission, who spoke on the imperative need for a rational approach to the situations which confront a community. He cited the great economic loss and the misery and sorrow resulting from substitution of emotional motivation for reason, in dealing with conditions where differences of opinion arrayed men in hostile camps. The luncheon was well attended.

On March twelfth, the Chapter held its regular March meeting in the Cosmos Club. The speaker was P. J. Federico of the United States Patent Office who addressed the group on Patents and their Relation to the Chemist. Mr. Federico outlined the history of the patent system from the middle ages and discussed in some detail many of the intricacies relating to the patenting of chemical discoveries. Present also was Dr. Joseph Rossman, author of the well-known work, *Patent Law for the Chemist*, who spoke briefly during the discussion. President L. N. Markwood presided.

The Washington Chapter visited the laboratories of the Federal Bureau of Investigation, Department of Justice, on Thursday, March twenty-fifth, as guests of the Director, J. Edgar Hoover, who received the members at the conclusion of the inspection trip. The activities of the Bureau were explained to the group by those in charge and a demonstration of firearms in the target range was presented that proved most interesting. Of particular interest were the well equipped laboratories where chemistry in the service of crime detection was exhibited. The optical room containing the spectrophotometer and ultra-violet illumination apparatus was also well appreciated. The party

finally was ushered into the gymnasium but few accepted the opportunity for exercising after walking for two hours through the laboratories. Fifty members and friends attended.

The April luncheon, held in the Department of Agriculture on the seventh, was addressed by Hon. Henry A. Wallace, Secretary of Agriculture, who spoke on the need for a coördination of specialists in attacking certain problems. President L. N. Markwood presided and thirty-four were present.

Vision

A polished stone within my hand
I hold,
And toss it in the air, and catch
and toss again;
Watching the reflection of the light
that moulds
Its lovely falling, re-ascending
plane.
On what far planets did this sun-
beam shine?
What empires scorned to reach my
window-sill?
Flying through centuries of im-
perishable time
To strike this earthly rock? But
yet a miracle!
Turned from that structure to my
eye, it bears
The stone uplifted there upon its
wing
Translated intangible; swift beauty
in the air
Rushing with ultimate speed to
swiftly fling
The retina its message so that I
see!
This solid rock becomes a part of
me.

—Robert Spencer Barnett, F.A.I.C.

OUR NEW MEMBERS

ROY B. ANDERSON, F.A.I.C., received the B.Sc. degree from Rutgers University. Specializing in paint and varnish technical work, he is secretary of the Brooklyn Varnish Manufacturing Company, Brooklyn, N. Y.



PERRY A. BONN, F.A.I.C., obtained the Ph.D. degree from the State University of Iowa, and has also done graduate work at the University of Chicago. He specializes in the fields of inorganic chemistry and the teaching of chemistry; and has written two text books, as well as various articles, particularly on non-aqueous solvents. He is teacher of chemistry at the State University of Iowa, Iowa City, Iowa.



SIDNEY BORN, F.A.I.C., holds the Ph.D. degree from Columbia University. Particularly interested in petroleum engineering, he has published more than twenty-five articles and holds four patents. He is director of petroleum research at the University of Tulsa, Tulsa, Oklahoma.



H. C. BRIL, F.A.I.C., was graduated from Miami University and obtained the Ph.D. degree from the University of Michigan. Specializing in organic chemistry, fermentation, chemical education, and drugs, he is author or co-author of more than forty-four publications, many of them dealing with his researches in the Philippine Islands, where he directed the work of the Division of Organic Chemistry, of the

Food and Drug Administration, for four years. He is now professor and head of the Department of Chemistry of Miami University, Oxford, Ohio.



MILTON BURTON, F.A.I.C., obtained the Ph.D. degree from New York University. He is particularly interested in hydrogen and hydroxyl ion catalysis, theory of tautomerism, photoelectric cell phenomena, gaseous conduction, rectifiers, condensers, and resistors. He teaches in the Department of Chemistry, New York University, New York, N. Y.



LEO M. CHRISTENSEN, F.A.I.C., received the Ph.D. degree from Iowa State College. He specializes in zymotechnology, and the biochemistry of bacteria. He is secretary-treasurer of the Chemical Foundation of Kansas Company, Atchison, Kansas.



FRIEND E. CLARK, F.A.I.C., was graduated from West Virginia University with the B.S. degree and from Johns Hopkins University with the Ph.D. degree. He has also studied at the University of Chicago and the University of Berlin. He has written several articles on organic chemistry for German and American Journals, and specializes in organic and industrial chemistry. He is head of the Chemistry Department and chairman of the Graduate Council of West Virginia University, Morgantown, West Virginia.

EVERITT J. COLE, F.A.I.C., has the B. S. degree from Polytechnic Institute of Brooklyn. Specializing in the manufacture of paints, varnishes, and lacquers, he is treasurer of the Manufacturers' Varnish Company, Inc., Brooklyn, N. Y.



JAMES E. COPENHAVER, F.A.I.C., was graduated from Emory and Henry College, from Vanderbilt University, and from Johns Hopkins University, receiving the Ph.D. degree from the latter institution. Specializing in M-diethyl benzene and its derivatives: dyes and dye intermediates, and the culture of indigo in South Carolina and Georgia, he is the author of several articles, and has contributed to chemical handbooks and encyclopedias. He is associate professor of chemistry at the University of South Carolina, Columbia, S. C.



FRANK W. DOUGLAS, F.A.I.C., received degrees from Albion College, the University of Michigan, and Cornell University, obtaining the Ph.D. degree from the latter institution. His specialty is germanium. He is professor of chemistry at Colorado College, Colorado Springs, Colorado.



WILLIAM DREYFUS, F.A.I.C., obtained the Sc.D. degree from the University of Geneva. He specializes in coal tar disinfectants, cattle and sheep dips, liquid soaps, bacteriological standardization of disinfectants, and is director of the Chemical Department of the West Disinfecting Company, Long Island City, New York.

PRESTON M. DUNNING, F.A.I.C., was graduated as a chemical engineer from Pratt Institute, Brooklyn, New York. He is interested in research and physical chemistry in the production of paint and varnish, including the formulation and study of economical methods. He is superintendent and chief chemist of the Colonial Works, Inc., Brooklyn, New York.



LUCIUS W. ELDER, F.A.I.C., obtained the A.B. degree from Haverford College and the Ph.D. degree from Harvard University. He specializes in physico-chemical applications in analytical chemistry; and the autocatalytic oxidation of vegetable oils and fats. He has published several articles in the technical journals, and is research chemist with the General Foods Corporation, Battle Creek, Michigan.



ADOLF C. ELM, F.A.I.C., received the Ph.D. degree from the University of Marburg, Germany. He specializes in paint and varnish chemistry and research, and is the author or co-author of a number of publications. He is research chemist with the New Jersey Zinc Company, (of Pennsylvania), Palmerton, Pennsylvania.



RALPH H. EVERETT, F.A.I.C., is a graduate of Yale University. He is secretary in charge of purchase and production of Keystone Varnish Company, Brooklyn, N. Y.



GEORGE W. FIERO, F.A.I.C., holds degrees from the University of Southern California, the University of Buffalo,

and the University of Wisconsin, from which he has the Ph.D. degree. He specializes in plant chemistry and pharmaceutical chemistry, and is the author of several journal articles and one textbook. He is assistant professor of *materia medica* at the University of Buffalo, Buffalo, New York.



HOWARD W. GOULD, F.A.I.C., studied at McKendree College, the University of Illinois, and the University of Iowa, from which he obtained the Ph.D. degree. His preferred technical subjects are inorganic chemistry, metallurgy, electricity, and modern physics. He is the author of several articles and of a textbook on physical science. He is head of the Department of Physical Science, Northern Illinois State Teachers College, DeKalb, Illinois.



KENNETH J. HOWE, F.A.I.C., was graduated from Williams College. Specializing in paint and varnish chemistry, he is the author of various articles in trade journals and other publications. He is vice-president of The Thibaut and Walker Company, Long Island City, New York.



GEORGE A. HOWLAND, F.A.I.C., received a degree in chemical engineering from Lehigh University, and has also studied at Rider College and Columbia University. He specializes in the manufacture of phosphates, electric furnace operation, and the location of chemical markets. He is engaged in market research for the Tennessee Corporation, Atlanta, Georgia.

CLIFFORD S. LEONARD, F.A.I.C., obtained the M.S. degree from Yale University and the Ph.D. degree from the University of Wisconsin. His preferred chemical fields are pharmaceutical chemistry, pharmacology and absorption spectrophotometry, and he is the author of more than forty technical articles. He is research biochemist with the White Laboratories, Inc., Newark, N. J.



WALTER A. MCKIM, F.A.I.C., holds the B.S. degree from North Dakota State College and the M.S. degree from Massachusetts Institute of Technology. Specializing in paint and varnish technology, he is the patentee of four improvements in paint materials, and has presented papers at various technical meetings or before university groups. He is technical adviser to sales at the Pittsburgh Plate Glass Company, Newark, N. J.



SIDNEY E. MILLER, A.A.I.C., received two degrees from Oklahoma University, and the Ph.D. degree from Minnesota University. He is co-author of a paper on the structure of hydroxyazo compounds, and specializes in organic chemistry. He is research chemist at General Mills, Inc., Minneapolis, Minnesota.



MAURICE L. MOORE, A.A.I.C., obtained two degrees from the University of Florida, and the Ph.D. degree from Northwestern University. Preferring the fields of organic chemistry and bacteriology with special interest in the application of organic sulfur compounds to medicine, he is the author

of several technical articles on these subjects. He is organic research chemist with Sharp and Dohme, Inc., Philadelphia, Penna.



LOTTIE F. MUNN, F.A.I.C., was graduated from Baldwin-Wallace College with the A.B. degree, and from the University of Illinois with the M.S. and Ph.D. degrees. She specializes in inorganic and analytical chemistry and bacteriology, and is the author of a paper on "Studies in Tellurium." She is professor of chemistry at Lake Erie College, Painesville, Ohio.



GORDON H. MUTERSBAUGH, F.A.I.C., studied at Case School of Applied Science and Ohio State University. He holds two patents in the nitro-cellulose lacquer and metallic soap fields. He is superintendent of the factory and laboratory of The Glidden Company, Cleveland, Ohio.



HAROLD C. PARKS, F.A.I.C., is a graduate of Yale University. He specializes in the manufacture and use of artists' materials, and has written several articles on this subject. He is laboratory chief of Devoe and Ray-nolds Company, Inc., Newark, N. J.



HENRY F. PAYNE, F.A.I.C., was educated at Pratt Institute and Polytechnic Institute. He is particularly interested in the formulation and production of paint, varnish, and synthetic resins, and is the author of an article in this field. He is chief chemist of John L. Armitage and Company, Newark, N. J.

SIDNEY H. ROBERTS, F.A.I.C., received two degrees from Wesleyan University. He is a chemist in the Medical Department of Aetna Life Insurance Company, Hartford, Conn.



WALTER M. SCOTT, F.A.I.C., holds the Ph.D. degree from Yale University. His preferred chemical fields are organic chemical research and the chemistry of textiles with particular emphasis upon silk and its processing. He is the author of thirty-three technical articles. His position is consulting chemist with Gustavus J. Esselen, Inc., Boston, Massachusetts.



WALTER T. L. TEN BROECK, F.A.I.C., received the Ph.D. degree from Rutgers University. He has published an article on "metal pyridine fluosilicates." He is research chemist for the Good-year Rubber Plantations Company, Dolok Merangir, East Coast Sumatra, Netherlands East Indies.



JOHNSTONE E. WHEELANDS, F.A.I.C., is a graduate of the University of Toronto. He is research engineer for the Bakelite Corporation, Bloomfield, N. J.



WILLIAM T. WHITE, F.A.I.C., was graduated from Alabama Polytechnic Institute and has also studied at Southern University. He specializes in analytical chemistry, the manufacturing of heavy chemicals, and electric furnaces. He is assistant chemist for the Tennessee Valley Authority, Fertilizer Works, Wilson Dam, Alabama.

CHEMISTS ABROAD

By James N. Taylor, F.A.I.C.

COL. HON. E. F. LAWSON, D.S.O., M.C., at the annual dinner of the Institution of Chemical Engineers held recently at the Hotel Victoria, London, in proposing the toast, "The Institution of Chemical Engineers," said that the chemical engineer had a most important task in the creating, planning, and directing of industry. In the eighteenth century, and at the beginning of the nineteenth century, British industry gained its preëminence because of the skill of the workmen and the pride they took in their work, but if British industry was going to maintain that preëminence it would do so only through the brains of those who were planning industry and discovering and directing new processes in order to meet the intense competition which now existed. It was absolutely impossible to estimate the benefits which the people of the world derived from the development of chemical processes, and it was here that the Institution of Chemical Engineers was playing such an important part and had done so ever since its inception fourteen years ago. — *The Oil and Colour Trades Journal (London)*.

THE Lord President has appointed Viscount Falmouth to be a member of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research, according to *The Industrial Chemist (London)*. Professor A. C. G. Egerton, M.A., F.R.S., has retired from the Council on completion of his term of office.

"THE Chemist As Administrator" was the topic discussed by Dr. R. H. Pickard, F.R.S., President of the Institute of Chemistry, at the Fifty-ninth Annual General Meeting held in March, according to *The Chemical Trade Journal and Chemical Engineer (London)*. This year, on October second, said Dr. Pickard, the Institute would attain the sixtieth anniversary of its original incorporation. The ideals of its founders had been steadily pursued; it has enjoyed the privilege of a Royal Charter for over a half a century, and it was honored by the patronage of the Crown. Chemists, by the very nature of their calling, had been for the most part of a retiring and modest disposition, peace-loving, and philosophical; but it had been remarked lately that chemists who were also men of affairs were coming to the fore in increasing numbers. Everything possible should be done to encourage in the profession a continuous supply of men of that type. Great concerns were seeking such men, and were prepared to reward them on a very high scale; but there was not as yet a sufficient supply to meet demands of that kind easily.

The supply of men and women for administrative posts was a difficult problem. In most cases, the head of any organization found himself almost immediately faced with the task of looking for his successor. In attaining an administrative post with the responsibility that it entailed, there was some danger of the chemist losing touch with his science, so that it became

more and more difficult for him to encourage the workers in the laboratories. The Appointments Registers of the Universities and the Institute were very helpful to employers who were looking for individuals who were starting a career, but this mechanism was not frequently employed for the interchange of men with ten or fifteen years' experience. There seemed to be a need for some means of introducing new talent and initiative from one great industry to another.

S. O. L. GEL ("A bright young thing, a disciple of Brighter Journalism, . . .") writing in *The Oil and Colour Trades Journal* (London), says among other mighty interesting things that

"Certain Universities in the United States have become about as fed-up with their usual lectures as many English Universities have with theirs. A plan has therefore been evolved which should work very well for a short time. This is that the American lecturers should pay a visit to this country and inflict the offending lectures on our students, while the old boys from our side should take a trip across the Atlantic and do likewise, staying for as long as possible. It is hoped by this plan to tempt more students to attend their lectures, and even sometimes to take a note or two."

D. R. EUGEN MÜLLER, Danzig-Langfuhr, has been named Docent for organic chemistry and first assistant of the organic division of the chemical Institute of the University of Jena. — *Chemiker-Zeitung* (Köthen).

M. R. H. B. SOMERSET, formerly on the technical staff of Imperial Chemical Industries of Australia and New Zealand, Ltd., has been appointed technical assistant to Mr. Robert Woodhead, superintendent of Associated Pulp and Paper Mills, Ltd. This company is to erect a large plant near Burnie, Tas. — *Chemical Engineering and Mining Review* (Melbourne).

THE ROYAL Society announces the award of various medals. These include a Royal Medal to Professor R. H. Fowler for his work on statistical mechanics and related departments of modern mathematical physics. Professor E. G. Coker receives the Rumford Medal for researches on the use of polarised light in investigating stresses. The Davy Medal goes to Professor W. A. Bone for his work on contact catalysis, and on the mechanism of combustion of hydrocarbons, on the nature of flames, and on gaseous explosions. Dr. W. Schottky is awarded the Hughes Medal for his discovery of the Schrot effect in thermionic emission, and invention of the screen-grid tetrode and of a superheterodyne method of receiving wireless signals.



Are we men or are
we what?

Item 322 in a recent catalogue of W. Heffer and Sons, Cambridge, England, lists the forthcoming new edition of *American Men of Science* under ZOOLOGY and BIOLOGY.



Plan to attend the
Annual Meeting in
New York May fifteenth.

NEWS

Dr. Elliott J. Roberts, F.A.I.C., of the Dorr Company, spoke before a meeting of the Chemistry Seminar of New York University, March first, on "Micron Sizing—a Discussion, from the Points of View of Analysis and Commercial Practice, of Sedimentation of Solids in the Sub-screen Range, below Forty-three Microns." Dr. H. G. Lindwall, F.A.I.C., presided at the meeting.



Walter J. Murphy, F.A.I.C., managing editor of *Chemical Industries* for the past seven years, has resigned to become associated with the H. H. Rosenthal Co., Inc., 25 East 26th Street, New York, N. Y., distributors, importers and exporters of chemicals, oils and crude drugs. He will be principally engaged in sales development work.



Carl H. Geister, until recently with the Mellon Institute of Industrial Research in Pittsburgh, has joined the Technical Laboratory staff of the Dyestuffs Division of E. I. du Pont de Nemours and Company, Wilmington, Del. Mr. Geister will be engaged in research, particularly on the application of dyestuffs to leather, as well as in promoting the use of Fine Chemicals' products as tanning and dyeing aids.



Charles C. Concannon, F.A.I.C., returned recently from an air-trip to South America. As chief of the Chemical Division of the Bureau of Foreign and Domestic Commerce, he was invited by representatives of the Chilean nitrate industry to make a survey of that industry.

Stephen L. Tyler succeeded Frederic J. Le Maistre as executive secretary of the American Institute of Chemical Engineers, on April 1, 1937. Mr. Tyler's position is chemical engineer with Thermal Syndicate, Ltd., of New York, N.Y.



Dr. Alexander Silverman, F.A.I.C., head of the Department of Chemistry, University of Pittsburgh, delivered a lecture on "Glass and the Modern World" at Wellesley College, on Friday evening, March nineteenth. During the following week, he spoke on "Henry LeChatelier: His Life and Work" before the Glass Division of the American Ceramic Society in the Waldorf Astoria Hotel, New York.



Florence E. Wall, F.A.I.C., spoke at a meeting, April sixteenth, of the Chemistry Teachers' Club of New York, on the subject, "Scientific and Educational Aspects of Cosmetics."



The consulting firm of Kenney-Herstein, Inc., regrets to announce the resignation of Frederick Kenney, F.A.I.C. The consulting chemical practice will be continued under the name of Herstein Laboratories, Inc., at 18 East 41st Street, New York, N. Y.



The engagement of Miss Hannah Elizabeth Chelius, J.A.I.C., of Bayonne, New Jersey, to Mr. Charles Ferdinand Stark, Jr., was announced recently. Miss Chelius was a student medalist of THE AMERICAN INSTITUTE OF CHEMISTS from the College of Saint Elizabeth, in 1935, and is employed as bio-chemist in the Research Laboratory of New York City.

Robert J. Moore F.A.I.C., of the Bakelite Corporation, addressed the New York Professional Group, Alpha Chi Sigma, at a meeting held March third in New York City. His subject was "The Changing Varnish Industry". In tracing its recent history involving the change from an art to one of our largest chemical industries, Mr. Moore pointed out the growing recognition accorded the chemist not only in research, development, and plant control, but also in the sales and executive branches. The improvements in protective coatings made possible by modern synthetic resins were reviewed, especially in the fight against corrosion of metals, the chemistry of which was discussed.



Mr. Wheeler McMillen, vice president of the Farm Chemurgic Council, spoke at a meeting of the Chemistry Teachers' Club, New York, N. Y., March nineteenth, on, "The Problem of Farm Chemurgics". Mr. McMillen emphasized that the solution of the agricultural problems of today lies in the hands of the chemists, who must develop additional new uses and new industrial materials out of farm products formerly used for food purposes only.



James E. Kendall, on an American tour from Edinburgh, Scotland, spoke on the subject of "Liquids and Solutions" at a joint meeting of the American Section of the Society of Chemical Industry and the American Chemical Society on April ninth, in New York, N. Y. Dr. Kendall is an Honorary Member of the American Institute of Chemists. James G. Vail, F.A.I.C., presided at the meeting.

Chemical Warfare

Science has humanized warfare, contrary to popular belief, said Colonel Adelmo Gibson, D.S.M., D.S.O., Chemical Warfare Service, United States Army, speaking before the Canadian Club of New York on March seventeenth. Colonel Gibson is chemical officer of the Second Corps Area on the staff of Major General Frank McCoy, Governor's Island, New York.

He described the first gas attack at Ypres, during the World War, where, although gas in warfare was not a new idea, it was first employed on a large scale by the Germans. Previously, chemical industry had not advanced far enough to make suitable chemicals available in quantity.

Chemical research has failed so far to discover war gases other than those used in the World War, because of the difficulties of practical application. Laboratory results are difficult to achieve under field conditions.

Chemical warfare caused a smaller percentage of deaths (two per cent) among its casualties than did other forms of warfare (twenty-five per cent). Although gas may be considered cruel, it is certainly as humane as high explosives and bayonets and probably more humane. Moreover, whole populations may be protected from gas by means of masks. Different gases of varying strength, according to need, may be employed, from the mild tear-gases which put a man out of commission without after-affect, to the severe mustard gas, with which, under certain conditions, towns might be taken without destroying them with heavy artillery. Colonel Gibson pointed out, also, that much popular hysteria about the destruction of cities by gas was unfounded on fact.

Chemist Wanted

Must be a Ph.D. of at least 10 years standing; speak English and understand it perfectly; experience of about five years as a chemist in an industrial plant preferably in the manufacture of specialities for the textile and leather trades; should have complete knowl-

edge of the manufacture of products for the textile industry in its various branches, as well as for leather; quantitative and qualitative analysis; pharmaceutical and biological chemistry, fermentations, especially bacterial and mould origin. Write Box 2, THE CHEMIST.

Reprinted

In *The Shanghai Evening Post and Mercury*, Shanghai, China, January 15th, the article, by James N. Taylor, F.A.I.C., entitled "Chemists in Philately" which appeared originally in THE CHEMIST for October, 1936.

In *The Chemical Digest*, publication of Foster D. Snell, Inc., Brooklyn, N. Y., excerpts from the article, "You Can't Keep a Chemical Secret," by Edward Thomas, which appeared in the December 1936, CHEMIST.



"My wife tried an interesting experiment at my suggestion—a cellulose-acetate cocktail frock with phenol-formaldehyde buttons."

—Cartoonist Alan Dunn in *The New Yorker*.



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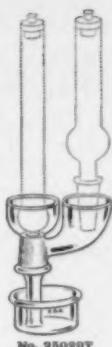


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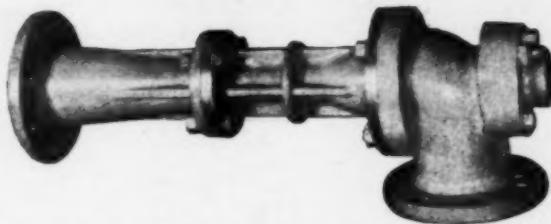
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